What is claimed is:

1. An optical switching subsystem comprising:

a plurality of input optical ports for inputting an optical signal;

a plurality of output optical ports for outputting the optical signal;

an optical switch formed by a micro electromechanical system (MEMS) for switching an optical path among said input optical ports and said output optical ports;

a controller for instructing said optical switch to execute switching operation; and

self-diagnosis means for measuring performance characteristics of said optical switching subsystem and diagnosing said optical switching subsystem based upon said performance characteristics.

2. The optical switching subsystem according to claim 1, wherein said performance characteristics are switching time of the optical path.

3. The optical switching subsystem according to claim 1, wherein said performance characteristics are control input value for inputting to said optical switch or a state variable of said controller used for calculating said control input value.

4. The optical switching subsystem according to claims 1, wherein said self-diagnosis means notifies a host system of a result of self-diagnosis.

5. The optical switching subsystem according to claim 1, wherein said self-diagnosis means ranks said performance characteristics and notifies a host system of ranking

information.

6. The optical switching subsystem according to claim 1, wherein said self-diagnosis means is operated without an instruction from a host system.

7. An optical switching subsystem comprising:

a plurality of input optical ports for inputting an optical signal;

a plurality of output optical ports for outputting the optical signal;

an optical switch formed by a micro electromechanical system (MEMS) for switching an optical path among said input optical ports and said output optical ports;

a controller for instructing said optical switch to execute switching operation; and

calibration means for calibrating control over the operation of said optical switch.

8. The optical switching subsystem according to claim 7, said calibration means comprises compensating means for calculating a controller output correction value.

9. The optical switching subsystem according to Claim 7, wherein said calibration means comprises gain compensating means for compensating converting correction gain between control input and control output of the optical switch.

10. The optical switching subsystem according to claim 7,

said calibration means is executed when the optical switching subsystem is activated and every predetermined time without an instruction from a host system.

11. An optical switching subsystem comprising:

a plurality of input optical ports for inputting an optical signal;

a plurality of output optical ports for outputting the optical signal;

an optical switch formed by a micro electromechanical system (MEMS) for switching an optical path among said input optical ports and said output optical ports;

a controller for instructing said optical switch to execute switching operation;

self-diagnosis means for measuring performance characteristics of said optical switching subsystem and diagnosing said optical switching subsystem based upon said performance characteristics; and

calibration means for calibrating control over the operation of said optical switch.

12. The optical switching subsystem according to Claim 11, wherein said calibration means comprises compensating means for calculating a controller output correction value and said self-diagnosis means operates based upon said controller output correction value.

13. The optical switching subsystem according to Claim 11, wherein said calibration means comprises gain compensating means for compensating converting correction gain between control input and control output of the optical switch and said self-diagnosis means operates based upon said converting correction gain.

14. The optical switching subsystem according to claim 11,

wherein the calibration means operates when the self-diagnosis means determines

that a corresponding reflecting mirror of the optical switch fails based on measured performed characteristics.

15. The optical switching subsystem according to Claim 14, wherein the self-diagnosis means operates again after the calibration is executed by the calibration means, and the self diagnosis means notifies a host system when it is diagnosed at that time that the corresponding reflecting mirror fails.

16. An optical switching subsystem comprising:

a plurality of input optical ports for inputting an optical signal;

a plurality of output optical ports for outputting the optical signal;

an optical switch formed by a micro electromechanical system (MEMS) for switching an optical path among said input optical ports and said output optical ports;

a subsystem controller circuit for controlling said optical switching subsystem;

a switching module controller circuit for controlling said optical switch;

a memory connected to said subsystem controller and said switching module controller, for storing control parameters related to said optical switch;

a monitor for outputting a signal to the subsystem controller according to said output signal.

17. An optical communication system comprising:

said optical switching subsystem according to claim 16, a host system said host system recurring information related said optical switch from said optical switching

subsystem.

18. The optical switching subsystem according to claim 16, comprising a ranking circuit for determining ranks of operation of switching elements.

19. The optical switching subsystem according to claim 16, comprising a feedback control circuit for feedback controlling.

20. The optical switching subsystem according to claim 19, wherein said feedback control circuit includes said memory, a controlled object for outputting control output, a controller for outputting output of controller to said controlled object, and a comparator for comparing said control output with reference value from said memory.

21. The optical switching subsystem according to claim 20, wherein said feedback control circuit further includes a controller output compensator for outputting controller output correction value, a signal adder for adding the output of controller and the controller output correction value, and a gain compensator for outputting control input to said controlled object.

22. An optical switching subsystem self-diagnosing method comprising:
monitoring an intensity of an optical signal in an output optical port;
calculating a control voltage for controlling an optical switch according to at least

said intensity of said optical signal;

controlling a mirror of the optical switch;

determining ranks of operation of plural mirrors in said optical switch.

23. The optical switching subsystem self-diagnosing method according to claim 22, further comprising

reading data for calculating said control voltage and

storing data acquired said operation of said optical switch.

24. The optical switching subsystem self-diagnosing method according to claim 22, further comprising

notifying a host system of information related to said ranks.

25. The optical switching subsystem self-diagnosing method according to claim 22, further comprising

compensating said control voltage.